National Aeronautics and Space Administration

Crew of Space Shuttle Mission STS-121

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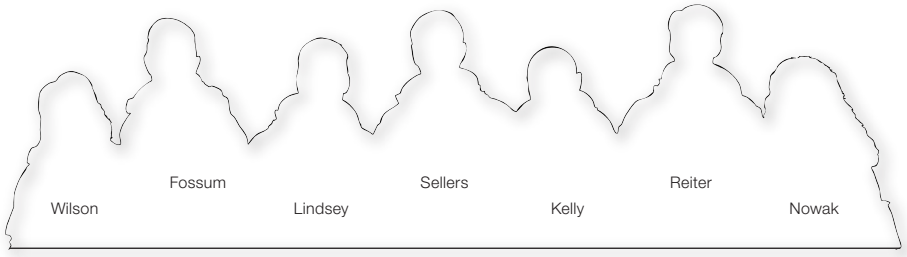

Commander
Steven W. Lindsey (Colonel, USAF)

Steve Lindsey was born in Arcadia, California, and grew up in Temple City, California. He received a B.S. degree in engineering sciences from the United States Air Force Academy and an M.S. degree in aeronautical engineering from the Air Force Institute of Technology. After receiving his pilot wings at Reese Air Force Base (AFB), Texas, Lindsey qualified in the RF-4C Phantom II and was assigned to the 12th Tactical Reconnaissance Squadron at Bergstrom AFB, Texas, where he served as a combat-ready pilot, instructor pilot, and academic instructor. He was then selected to attend graduate school at the Air Force Institute of Technology, Wright-Patterson AFB, Ohio, where he studied aeronautical engineering. Later, he attended the USAF Test Pilot School at Edwards AFB, California. Lindsey was subsequently assigned to Eglin AFB, Florida, where he conducted weapons and systems tests in F-16 and F-4 aircraft. While a member of the 3247th Test Squadron, Lindsey served as the deputy director, Advanced Tactical Air Reconnaissance System Joint Test Force, and as the squadron's F-16 Flight Commander. He was later selected to attend Air Command and Staff College at Maxwell AFB, Alabama. Upon graduation, he was reassigned to Eglin AFB as an Integrated Product Team leader in the USAF SEEK EAGLE Office where he was responsible for Air Force weapons certification for the F-16, F-111, A-10, and F-117 aircraft. Lindsey was selected to be an astronaut by NASA in December 1994 and initially worked on the Multifunction Electronic Display System program. Additionally, he worked as the Shuttle landing and rollout representative, responsible for training flight crews and testing orbiter landing techniques and flying qualities. After his second flight, he led multiple design teams in the creation and development of the Orbiter Cockpit Avionics Upgrade (CAU) project. Most recently, he served as the Chief of International Space Station Operations for the astronaut office, responsible for integrating astronaut, civil service, and contractor activities in providing support to all aspects of the development, testing, crew training and operations of the International Space Station. Lindsey has logged over 5,000 hours of flying time in 50 different types of aircraft. He flew as pilot on STS-87 (1997) and STS-95 (1998), and was mission commander on STS-104 (2001). Lindsey is assigned to command the crew of STS-121.

Pilot
Mark E. Kelly (Commander, USN)

Mark Kelly was born in Orange, New Jersey, but considers West Orange, New Jersey, to be his hometown. He received a B.S. degree in marine engineering and marine transportation (with highest honors) from the U.S. Merchant Marine Academy, and a M.S. degree in aeronautical engineering from the U.S. Naval Postgraduate School. Mark was designated a Naval Aviator in 1987, and initially flew the A-6E Intruder attack aircraft off of the aircraft carrier USS Midway. He flew 39 combat missions in Operation Desert Storm. After graduating from the U.S. Naval Test Pilot School in 1994 he worked as a project test pilot at the Carrier Suitability Department of the Strike Aircraft Test Squadron in Patuxent River, Maryland, flying the A-6E, EA-6B and F-18 aircraft. He was assigned to the U.S. Naval Test Pilot School as an instructor pilot in the F-18, T-38 and T-2 aircraft when selected for the astronaut program in 1996. He has logged over 4,000 flight hours in more than 50 different aircraft and has over 375 carrier landings. He was the pilot of the 17th flight of Space Shuttle *Endeavour*, STS-108 in 2001, and has logged almost 12 days in space. STS-121 is Mark's second space mission.

Mission Specialist
Piers J. Sellers (Ph.D.)

Piers Sellers was born in Crowborough, Sussex, United Kingdom and was brought up in Europe, the Middle East and England. He received a B.Sc. in ecological science from the University of Edinburgh (Scotland), and a doctorate in biometeorology from Leeds University (United Kingdom). Sellers moved to the USA in 1982, and worked as a research scientist at NASA/Goddard Space Flight Center investigating how the Earth's biosphere and atmosphere interact; this involved computer modeling of the climate system, satellite remote sensing studies, and field work using aircraft, satellites and ground teams. The field work was carried out in Kansas, Russia, Africa, Canada, and Brazil. Sellers was selected as an astronaut candidate by NASA in 1996, and was initially assigned technical duties in the Astronaut Office Computer Support Branch. This was followed by an assignment to Space Station Branch where he served as a liaison between Russian and U.S. software development teams and worked halftime in Moscow for nearly three years. Piers completed his first flight on STS-112 logging over 252 hours in space, including almost 20 EVA hours in 3 space walks. STS-121 is his second Space Shuttle mission.

Mission Specialist
Michael E. Fossum

Michael Fossum was born in Sioux Falls, South Dakota, and grew up in McAllen, Texas. He received a B.S. in Mechanical Engineering (Texas A&M University, 1980); an M.S. in Systems Engineering (Air Force Institute of Technology, 1981); and an M.S. in Physical Science (Space Science) (University of Houston-Clear Lake, 1997). Fossum received his commission in the US Air Force from Texas A&M University upon graduation. After completing his graduate work at the Air Force Institute of Technology, he was detailed to NASA Johnson Space Center where he supported Space Shuttle flight operations. He graduated from the Air Force Test Pilot School, Edwards Air Force Base, California, and served as a Flight Test Engineer in the F-16 Test Squadron and as a Flight Test Manager at Detachment 3, Air Force Flight Test Center, Edwards AFB. He has logged over 1000 hours in 34 different aircraft. Fossum is currently a Colonel in the USAF Reserves. He resigned from active duty to work for NASA. At NASA, Fossum has served as a systems engineer evaluating the Russian Soyuz spacecraft for use as an emergency escape vehicle for the Space Station and selected to represent the Flight Crew Operations Directorate in an extensive redesign of the International Space Station. He continued working in the area of assembly operations, supporting the Astronaut Office as a Technical Assistant for Space Shuttle supporting design and management reviews, and serving as a Flight Test Engineer on the X-38 (a prototype crew escape vehicle for the new Space Station, which was under development in-house by the Engineering Directorate at NASA-JSC and being flight tested at NASA-Dryden). He was selected in 1998, as an Astronaut Candidate. Fossum recently served in the Astronaut Office Capcom Branch where he a Capsule Communicator (capcom) in Mission Control and was the Lead Capcom for Space Station Expedition 6. He previously served in the Space Station Operations Branch as Lead for Space Station flight software development. STS-121 is his first Space Shuttle mission.

Mission Specialist
Lisa M. Nowak (Commander, USN)

Lisa Nowak was born in Washington, D.C. She received a B.S. degree in aerospace engineering from the U.S. Naval Academy; and an M.S degree in aeronautical engineering and a degree of aeronautical and astronautical engineer from the U.S. Naval Postgraduate School. After graduation from the Academy, Nowak was assigned to the Johnson Space Center for six months providing Shuttle Training Aircraft engineering support. She then reported to flight school where she earned her wings as a Naval Flight Officer, followed by Electronic Warfare (EW) School and initial A-7 training. Nowak was assigned to Electronic Warfare Aggressor Squadron 34 at Point Mugu, California, where she flew EA-7L and ERA-3B aircraft, supporting the fleet in small and large-scale exercises with jamming and missile profiles. While assigned to the squadron, she qualified as Mission Commander and EW Lead. Nowak completed two years of graduate studies at Monterey, and began working at the Systems Engineering Test Directorate at Patuxent River, Maryland. She was selected for both Aerospace Engineering Duty and U.S. Naval Test Pilot School. She worked as an aircraft systems project officer at the Air Combat Environment Test and Evaluation Facility and at Strike Aircraft Test Squadron, flying the F/A-18 and EA-6B at Patuxent River. Nowak was then assigned to the Naval Air Systems Command, working on acquisition of new systems for naval aircraft. She has logged over 1,500 flight hours in more than 30 different aircraft. Nowak was selected as an astronaut candidate in 1996. Her technical duty assignments in the Astronaut Office have included Operations Planning Branch, Robotics Branch, and CAPCOM Branch, where she worked in Mission Control as prime communicator with on-orbit crews. STS-121 is her first Space Shuttle mission.

Mission Specialist
Stephanie D. Wilson

Stephanie Wilson was born in Boston Massachusetts. She received a B.S. degree in engineering science from Harvard University, and a M.S. degree in aerospace engineering from the University of Texas. After graduating from Harvard, Wilson worked for the former Martin Marietta Astronautics. As a Loads and Dynamics engineer for Titan IV, Wilson was responsible for performing coupled loads analyses for the launch vehicle and payloads during flight events. Following the completion of her graduate work that focused on the control and modeling of large, flexible space structures, she began working for the Jet Propulsion Laboratory. As a member of the Attitude and Articulation Control Subsystem for the Galileo spacecraft, Wilson was responsible for assessing attitude controller performance, science platform pointing accuracy, antenna pointing accuracy and spin rate accuracy. She worked in the areas of sequence development and testing as well. Wilson also supported the Interferometery Technology Program as a member of the Integrated Modeling Team, which was responsible for finite element modeling, controller design, and software development. NASA selected Wilson as an astronaut candidate in 1996. She was initially assigned technical duties in the Astronaut Office Space Station Operations Branch to work with Space Station payload displays and procedures. She then served in the Astronaut Office CAPCOM Branch, working in Mission Control as a prime communicator with on-orbit crews. Following her work in Mission Control, Wilson was assigned technical duties in the Astronaut Office Shuttle Operations Branch involving the Space Shuttle Main Engines, External Tank and Solid Rocket Boosters. STS-121 is her first Space Shuttle mission.

Mission Specialist
Thomas Reiter European Space Agency

Reiter was born in Frankfurt/Main, Germany. He graduated from the Armed Forces University, Neubiberg, Germany, with a Masters Degree in aerospace technology. He attended Class 1 test pilot training and graduated from the Empire Test Pilots School (EPTS), Boscombe Down, England. Reiter completed Class 2 test pilot training at the German flight test center, Manching, Germany. He also completed military jet training at Sheppard Air Force Base, Texas. His flight experience includes more than 2300 hours in over 15 types of military combat jet aircraft. Reiter joined the European Space Agency (ESA) and was selected as an ESA astronaut. Reiter was assigned to the ESA-Russian Euromir 95 mission to the Mir Space Station as on-board engineer for a record-breaking 179-day mission. He performed two spacewalks. STS-121 will be his first Shuttle flight. He will return to Earth either aboard the STS-116 Shuttle mission or aboard a Russian Soyuz.

STS-121 Patch Description

The STS-121 patch depicts the Space Shuttle *Discovery* docked with the International Space Station (ISS) in the foreground, overlaying the astronaut symbol with three gold columns and a gold star. The ISS is shown in the configuration that it will be in during the STS-121 mission. The background shows the nighttime Earth with a dawn breaking over the horizon.

STS-121, ISS mission ULF1.1, is the final Shuttle Return to Flight test mission. This utilization and logistics flight will bring a multipurpose logistics module (MPLM) to the ISS with several thousand pounds of new supplies and experiments. In addition, some new orbital replacement units (ORUs) will be delivered and stowed externally on ISS on a special pallet. These ORUs are spares for critical machinery located on the outside of the ISS. During this mission the crew will also carry out testing of Shuttle inspection and repair hardware, as well as evaluate operational techniques and concepts for conducting on-orbit inspection and repair.